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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,086	09/26/2001	William E. Richeson	TEK01 P-333	2451

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EXAMINER

ROJAS, BERNARD

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/964,086

Applicant(s)

RICHESON, WILLIAM E.

Examiner

Bernard Rojas

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22,32-35,37-43 and 45-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22,32-35,37-43 and 45 is/are allowed.
- 6) ☒ Claim(s) 46-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

The indicated allowability of claim 47 is withdrawn in view of the newly discovered reference(s) to Velayutha [US 2002/0179384]. Rejections based on the newly cited reference(s) follow. Groove [US 4,004,262] discloses the claimed invention and Velayutha [US 2002/0179384] discloses using a polyphenylene frictional material in a brake.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 46 recites the limitation "said yield strength" in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 46 recites the limitation "said powder metal core" in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 47 recites the limitation "said powder metal core " in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 48 recites the limitation "said donor material " in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grove [US 4,004,262] in view of Velayutha [US 2002/0179384].

Claim 48, Grove discloses an electromagnet with a polymer impregnated powder metal core [60, col. 5 lines 30 to 40] containing a coil [64] with a moldable material with a donor material comprising a glass epoxy [100, col. 6 lines 25 to 30], covering at least a portion of the core.

Grove fails to teach that the moldable material has a donor material comprising polyphenylene.

Velayutha teaches creating a frictional material for a brake out of a moldable polyphenylene or a glass epoxy [abs, paragraph 0006].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the polyphenylene donor material as shown by Velayutha in the brake of Grove since Velayutha discloses that polyphenylene is an equivalent material to the glass epoxy of Grove et al. [Velayutha paragraph 0006].

***Allowable Subject Matter***

Claims 1-5, 6-22, 32-35, 37-43 and 45 are allowed.

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Claims 47 and 48 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: Claim 32, the prior art of record does not teach nor suggest, in the claimed combination, a powder metal housing and core, a coil and a bobbin a frictional material comprised of a polymeric material for use in a brake, the powder metal housing having a rim thickness of between about 0.127 inches and 0.400 inches.

Claim 40, The prior art of record does not teach nor suggest, in the claimed combination, an electromagnet for use in a brake comprising with a polymer impregnated powder metal core containing a coil with a moldable covering at least a portion of the core, the yield strength of the powder metal core being between about 18.5 ksi and about 50 ksi, the powder metal core being adapted to maximize the rigidity of the electromagnet.


### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Rojas whose telephone number is (571) 272-1998. The examiner can normally be reached on M-F 8-4:00), every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Br

  
ELVIN ENAD  
SUPERVISORY PATENT EXAMINER  
27 NOV 06